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made him duller than ordinary, or how long the Quick-Silver had been in his Body.

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IX. *A Letter of Dr. John Wallis, of May 14. 1698. to Sir John Blencowe (one of his Majesty's Justices of the Court of Common-Pleas) concerning the Observation of Easter for this present Year, on April 24. 1698.*

Sir,

Oxford, May. 14. 1698.

**I**N Answer to yours of *May 12.* (which I received this Morning) you may please to present my humble Duty and Service to the Lord Chief Justice *Holt*, with this Account of the *Seat of Easter*, of which he asketh.

That there may be some little Mistakes in the Calendar of the Common-Prayer Book (as now Printed) I shall not deny.

But (as to the present Point) *Easter* was observed this Year, according to the Rules, so understood as was intended, though there may seem to be wanting a Rubrick to make it plain.

The fundamental Rule of the Nicene Council (which we pretend to follow) for the keeping of *Easter*, is to this purpose :

*Easter-Day* is to be that *Sunday* which falls upon, or next after, the first Full Moon which happens next after the Vernal Equinox.

Which Vernal Equinox was then observed to fall on the One and Twentieth of *March* : And (in the Paschal Tables) is yet reputed so to fall ; (though it do now fall on the Eleventh of *March*, or sometimes the Tenth of *March*.)

E c

And

And therefore instead of *next after the Vernal Equinox*, we say, *next after the One and Twentieth of March*.

But then it is said (by a Mistake, I suppose) *after the First Full Moon*, instead of *upon, or next after the First Full Moon*, (for so it is to be understood) and added, *And if the Full Moon happens upon a Sunday, Easter-day is the Sunday after*. Which must needs be a Mistake. For, in such Case, it is to be *that Sunday*, not *the Sunday after*.

And so the Tables agree (contrary to this Note) both that *For Forty Years*, and that *To find Easter for Ever*.

And so it was observed in the Years 1668, 1678, and 1682. And so whenever the Case happens, that the Ecclesiastical Full Moon falls on a *Sunday*. But this (though it be a Mistake) doth not influence the present Case.

That which concerns the present Case, is, On what Day we must reckon the *Ecclesiastical Full Moon* to fall.

For we are not to judge, either the *Equinox*, or the *Full Moon*, according as they happen in the Heavens, or in our Almanacks; but according to the Paschal Tables, fitted to the time of the Nicene Council.

And accordingly, we reckon the Equinox to be now (as then it was) on *March 21*.

And as to the Full Moon (next after that Equinox) we are to Account it thus :

The Golden Number (fitted to the Cycle of Nineteen Years; after the End of which it begins again, at 1, 2, 3, &c.) is placed in the first Column of our Calendar, to tell us, on what Day (of such Year) the New Moon is *supposed* to happen, in each Month; and the Fifteenth Day of that Moon is *reputed* the Full Moon.

Now

Now the Golden Number, for the Year 1698, is 8. (That is, this is the Eighth Year of such Decem-novenal Cycle, or Circle of Nineteen Years; commonly called *Cyclus Lunar*, or the Circle of the Moon; as the other Circle of Twenty Eight Years, is called, *Cyclus Solar*, the Circle of the Sun, or rather of the Sunday-Letter.)

And this Number 8 stands in the Calendar at *Mar. 6.* which we must therefore *suppose* to be New Moon: (Though the New Moon were indeed *Mar. 2.* Like as it happens constantly in this Age, that the true New Moon is Four or Five Days sooner than the *reputed* Ecclesiastical New Moon.)

Now *Mar. 6.* being the New Moon, or First Day of the (*reputed*) Lunar Month (for such Year) *Mar. 20.* will be the 15th Day, or the (*reputed*) Full Moon for the Month of *March* this Year.

Which happens, this Year, to be *Sunday*; (the Domical Letter, for this Year, being *B.*)

But this happening before *March 21.* (the supposed Equinox) cannot be the Paschal Full Moon; but we must wait for another.

And we shall then find the Golden Number 8, standing at *Apr. 5.* for the New Moon of *April*, the same Year.

And therefore the Full Moon, or 15th Day of that (*reputed*) Lunar Month, is to be *Apr. 19.* (But the true Full Moon was *Apr. 15.* about Six a Clock in the Morning.)

Which (*Apr. 19.*) being *Tuesday*, the *Sunday* next following is *Apr. 24.* (where stands *B*, the *Sunday* Letter for this Year) which is therefore to be *Easter-day*, according to the intent of these Tables. And it was observed accordingly.

But it were to be wished, there had been somewhere a Rubrick, to direct how we are to find this (reputed) Full Moon; and, what is the Use of the Golden Number.

The Difference of the Ecclesiastick Account, in the Paschal Tables, from that of the Heavens, doth arise from hence; Because those Tables, when first made, were fitted, not to this Age, but to that of the Nicene Council; and did, at that time, agree very near with that of the Heavens: But, in this Age, they do considerably differ, (both as to the *Equinox*, and as to the *Full Moons*) for these Two Reasons:

I. The common Julian Year (by which we reckon) of 365 Days and 6 Hours, is somewhat too long; being about 11 Minutes of an Hour longer than the true Solar Year.

By reason whereof, the Equinox (and other Annual Seasons) go backwards about 11 Minutes, every Year: Which, from the Time of the Nicene Council, till now, amounts to about 11 Days.

So that the Equinox which then happened *Mar. 21.* is now come back to our *Mar. 11.* or rather *Mar. 10.*

Which, upon Pope *Gregory's* reforming the Roman Calendar (above 100 Years since) causeth the Difference of 10 Days, between what we call the *New Stile* and the *Old Stile*. Which (Two Years hence) in the Year 1700 (and thenceforth for 100 Years) will be 11 Days.

II. It was then supposed, that in 19 Years (which is the Compass of the Golden Number) the Lunations (of New Moon and Full Moon) did return to the same Day and Hour, as they were 19 Years before.

Which

Which is pretty near the Truth, but comes short by about an Hour and half.

Which *Hour and Half*, in every 19 Years, doth, since that Time, amount to about 4 or 5 Days.

Whence it comes to pass, that the *reputed* Full Moon is later, by 4 or 5 Days, than that of the Heavens.

But our *Easter*, is reckoned according to the *reputed* Full Moons (derived from the Golden Number) not according to those of the Heavens.

'Tis true, that in some Places of our Calendar (as commonly printed) the Golden Numbers are mis-placed, or mis-written. But it happens so luckily, that in all those wherein *Easter* is concerned (that is, from *Mar. 6.* to *Apr. 5.* inclusively) they be rightly placed.

And as to any other New Moons, if there be any mistakes, we are therein less concerned.